

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently amended) A vector comprising an exogenous gene which encodes a protein which has the same functional activity as a protein encoded by the *Arabidopsis thaliana* *MinE* or *MinD* gene and which when expressed in a plant cell enhances the efficacy of chloroplast transformation, and wherein the exogenous gene does not cross-hybridize with a homologous gene of the plant cell.

Claim 2. (Original) A cell comprising the vector of Claim 1.

Claim 3. (Previously Presented) A tissue culture comprising a cell of Claim 2.

Claim 4. (Original) A seed comprising the vector of Claim 1.

Claim 5. (Currently amended) The vector according to Claim 1, wherein said exogenous gene is, or has a significant amount of homology to, ~~derived from~~ a gene of *Arabidopsis thaliana*.

Claim 6. (Original) The vector according to Claim 1, wherein the exogenous gene is an exogenous *MinD* gene.

Claim 7. (Currently amended) The vector according to Claim 6, wherein said exogenous *MinD* gene is or has a significant amount of homology to, ~~derived from an~~ *Arabidopsis thaliana MinD* gene.

Claim 8. (Withdrawn) The vector according to Claim 1, wherein the exogenous gene is an exogenous *MinD* gene.

Claim 9. (Withdrawn) The vector according to Claim 8, wherein said exogenous gene is derived from *Arabidopsis thaliana MinE* gene

Claim 10. (Currently amended) A transgenic plant comprising within its nuclear genome an exogenous gene, wherein said exogenous gene encodes a protein which has the same functional activity as a protein encoded by the *Arabidopsis thaliana MinE* or *MinD* gene and which when expressed in a plant cell enhances the efficacy of chloroplast transformation, and wherein the exogenous gene does not cross-hybridize with a homologous gene of the plant cell.

Claim 11. (Currently amended) The transgenic plant according to claim 10, wherein said exogenous gene is or has a significant amount of homology to, ~~derived from a~~ gene of *Arabidopsis thaliana*.

Claim 12. (Original) The transgenic plant according to Claim 10, wherein said exogenous gene is an exogenous *MinD* gene.

Claim 13. (Currently amended) The transgenic plant according to Claim 12, wherein said exogenous *MinD* gene is, or has a significant amount of homology to, derived from an *Arabidopsis thaliana MinD* gene.

Claim 14. (Original) The transgenic plant according to Claim 10, wherein said transgenic plant is a tobacco plant.

Claim 15. (Withdrawn) The transgenic plant according to Claim 10, wherein said exogenous gene is an exogenous *MinE* gene.

Claim 16. (Withdrawn) The transgenic plant according to Claim 15, wherein said exogenous *MinE* gene is derived from *Arabidopsis thaliana MinE* gene.

Claim 17. (Withdrawn) A method of transforming the chloroplast genome of a plant, said method comprising the steps of:

A) producing a nuclear transgenic plants which contains large chloroplasts by:

i) providing a vector comprising an exogenous gene which encodes a protein which has the same functional activity as a protein encoded by the *Arabidopsis thaliana MinE* or *MinD* gene

and which when expressed in a plant cell causes the plant cell to have enlarged and/or a reduced number of chloroplasts; and,
ii) transforming the nuclear genome of a plant with said vector which comprises said exogenous gene; and,

B) transforming the chloroplast genome of said nuclear transgenic plant with a vector which comprises Gene of interest.

Claim 18. (Withdrawn) The method of Claim 17, wherein said exogenous gene is derived from *Arabidopsis thaliana*.

Claim 19. (Withdrawn) The method of Claim 17, wherein said exogenous gene is an exogenous *MinD* gene.

Claim 20. (Withdrawn) The method of Claim 19, wherein said exogenous *MinD* gene is derived from *Arabidopsis thaliana MinD* gene.

Claim 21. (Withdrawn) The method of Claim 17, wherein said nuclear transgenic plant is a tobacco plant.

Claim 22. (Withdrawn) A chloroplast transgenic plant produced by the method of Claim 17.

Claim 23. (Withdrawn) The method of Claim 17, wherein said exogenous gene is an exogenous *MinE* gene.

Claim 24. (Withdrawn) The method of Claim 23, wherein said exogenous *MinE* gene is derived from *Arabidopsis thaliana MinE* gene.

Claim 25. (Withdrawn) A method of selecting for plants that are chloroplast transgenics but not nuclear transgenics, wherein said method comprises:

A) crossing a plant produced by the method of Claim 22 with a wild-type plant; and,

B) segregating out the plants which express the exogenous gene or genes of interest in the chloroplast genome and further do not express the exogenous gene in the nuclear genome by identifying which plants have normal chloroplast size and number and have the desired characteristic produced by the exogenous gene expressed in the chloroplast genome.

Claim 26. (Withdrawn) The method of Claim 25, wherein said exogenous gene is derived from *Arabidopsis thaliana*.

Claim 27. (Withdrawn) The method of Claim 25, wherein said plant which is a chloroplast transgenic is a tobacco plant.

Claim 28. (Currently amended) A method of producing a transgenic plant which comprises one or a few large chloroplasts, said method comprising the steps of:

A) producing a vector comprising an exogenous gene which encodes a protein which has the same functional activity as a protein encoded by the

Arabidopsis thaliana *MinE* or *MinD* gene and which affects a plant cell by allowing for the expression of only one or a few large chloroplasts, and wherein the exogenous gene does not cross-hybridize with a homologous gene of the plant cell;

- B) transforming the nuclear genome of a plant with said vector; and
- C) selecting for plants with the desired phenotype;

wherein the efficacy of chloroplast transformation is enhanced.

Claim 29. (Currently amended) The vector according to Claim 28, wherein said exogenous gene is, or has a significant amount of homology to, ~~derived from~~ a gene of *Arabidopsis thaliana*.

Claim 30. (Original) The vector according to Claim 28, wherein the exogenous gene is an exogenous *MinD* gene.

Claim 31. (Currently amended) The vector according to Claim 30, wherein said exogenous *MinD* gene is, or has a significant amount of homology to, ~~derived from~~ an *Arabidopsis thaliana* *MinD* gene.

Claim 32. (Withdrawn) The vector according to Claim 28, wherein the exogenous gene is an exogenous *MinE* gene.

Claim 33. (Withdrawn) The vector according to Claim 32, wherein said exogenous *MinE* gene is derived from *Arabidopsis thaliana* *MinE* gene.